

ENVIRONMENTAL Fact Sheet



Former Asarco Smelter

U.S. Environmental Protection Agency, Region 10

Tacoma, Washington

June 2009

Point Ruston Remedial Action at the Former Asarco Tacoma Smelter Site - Questions & Answers

In recent months, the Environmental Protection Agency (EPA) has been asked a number of questions about the cleanup at the former Asarco Smelter site. Some of the questions are directly related to the EPA cleanup and some are related to the development of Point Ruston. We would like to share this information with you in the hopes that some of your questions may also be answered.

Who is responsible for the environmental cleanup at the former Asarco Tacoma Smelter?

The short answer: Asarco and Point Ruston have both signed onto a Consent Decree with the United States to perform cleanup work at the Asarco Smelter site. Asarco is currently in bankruptcy, and the United States has claims pending against Asarco in the bankruptcy.

The long answer: The Superfund law is known as a “polluter pays” law. This means that if possible, the polluter pays all costs including costs for cleanup and for EPA’s project management costs. In 2006, Point Ruston purchased the Asarco Tacoma Smelter property (the site) from Asarco. As part of the purchase, Point Ruston signed a legally enforceable document called a Consent Decree. When Point Ruston signed the Consent Decree, they assumed responsibility for the work at the Asarco Smelter site. As a result, Point Ruston is paying all of the costs associated with the cleanup and development. This includes cleanup of the site, cleanup of a portion of the sediments offshore of the site, and capping of the majority of the slag peninsula.

What is the acceptable risk level for Point Ruston as far as EPA, the State, and Pierce County are concerned?

Point Ruston is required to meet the same cleanup level that EPA has set for the Ruston and North Tacoma Yards. After the development of Point Ruston is complete, the risk level from exposure to site contaminants for adults, children and pets will be zero. The entire site will be capped to prevent any exposure. The integrity of the cap will be protected and maintained by Point Ruston and the future Condo Association. EPA does not speak for other agencies, even when in consultation with each other. If you would like to contact either Ecology or the Tacoma Pierce County Health Department, phone numbers are listed in the back of this fact sheet.

EPA's yard cleanup consists of two components – soil removal and measures to avoid exposure. Soil with arsenic concentrations over 230 ppm arsenic or 500 ppm lead is removed and replaced with clean soil. For yards with arsenic concentrations between 20 ppm and 230 ppm, homeowners are provided with information on measures to avoid exposure to contaminants. These measures are designed to prevent ingestion of soil and include wetting soil before digging, hand and face washing after playing or working in soil, and vacuuming carpets and rugs.

How much will the cleanup cost start to finish?

The estimate for cleanup that Point Ruston is conducting is \$28 million. EPA will receive up to \$5 million over time from the sale of the site, which will be used for the parts of the cleanup that Point Ruston is not responsible for (cleanup of the yacht basin and Ruston/North Tacoma yards.) In addition, EPA is reimbursed for all of its project costs including salaries, contractor support, and other costs related to overseeing the cleanup work done by Point Ruston.

Is the Schedule in the Scope of Work being met by Point Ruston?

Yes. Point Ruston was required to clean up a 10.5 acre area of contaminated sediments by placing a cap of clean sand/silt over the area within a year of the effective date of the Consent Decree. Point Ruston completed the work on schedule.

The schedule of work established by the Consent Decree for capping of the slag peninsula and the temporary site-wide cap requires that the caps be in place before the first building is occupied. The original predicted date for occupancy was October, 2009. That schedule has been delayed. The current schedule projects that occupancy will take place sometime in 2010. The work to cap the slag peninsula and installation of the temporary site-wide cap will be completed before that time.

What agency is overseeing the Asarco/Point Ruston Cleanup and who is in charge of inspecting and certifying that the work is being done?

EPA is overseeing the entire cleanup. We employ the contractor CH2M Hill for site inspections. We are responsible for ensuring that the work is being done and that the cleanup activities do not impact public health and the environment. We monitor the work to make sure that it is being conducted in an environmentally safe manner. In addition, we monitor the air sampling data collected around the site perimeter as well as water discharging from the site.

Where can I learn about what cleanup is planned?

The cleanup work that Point Ruston is completing on the site is described in the “Scope of Work” which is an attachment to the Consent Decree.

These documents are located on the EPA Region 10 web site:

<http://yosemite.epa.gov/r10/cleanup.nsf/sites/asarco>

Buildings are being constructed on the site. Is the site cap completed ?

The installation of the cap over the smelter site is integrated with the development construction. The foundations of the site buildings are part of the site cap. The final site cap will be in place when the development is completed.

Before the development is complete, the entire site will be graded and a temporary cap will be put in place. EPA will provide oversight during the cleanup and site development and will verify the cap is constructed to meet safe performance standards.

What is a site cap?

A site cap is a permanent layer that creates a barrier between contaminants and people living or working on a site. The cap must also prevent any water from contacting contaminants. A cap may be made of concrete, special impermeable asphalt, or a composite made of impermeable clay and plastic liners.

What is the Point Ruston cap?

The cap at Point Ruston will mainly be created by covering most of the site with impermeable concrete (building foundations and sidewalks) and asphalt (roads). This will prevent people from being exposed to the contaminants of concern: lead and arsenic. This type of cap not only provides protection, but also makes maintenance much easier than with other types of site caps. Clay and plastic liner systems will be used in some areas.

Who is responsible for site and cap maintenance once development is complete?

Point Ruston and the future homeowner/condo associations will remain responsible for post-cleanup operations and maintenance of the cap and other aspects of the cleanup as described in the Point Ruston Statement of Work (SOW), published in August, 2006. You can find a copy of the SOW under “decision documents” at the following website:

<http://yosemite.epa.gov/r10/cleanup.nsf/sites/asarco>

What are the training requirements for workers on the Point Ruston project? Do these requirements change through each stage of the project? Are site workers safe?

Point Ruston is required to provide health and safety training for all of the workers on the site. Based on the potential exposures at the site, Point Ruston personnel and the Industrial Hygienist & Safety trainer used by Point Ruston determined that 24-hour safety training was appropriate for the site. This decision was based on the fact that site contaminants were fully characterized and potential exposure was below published applicable safety standards. The health and safety training course and materials are provided to workers in English and in Spanish.

The Point Ruston construction workers are in an area that has been characterized, which means that the hazards have been identified. They are working on top of compacted soils from the Ruston/North Tacoma yard remediation, on poured slabs, and in clean areas. These soils are not hazardous waste.

Workers on clean areas of the site (such as Stack Hill) do not require safety training. On the site of the former smelter the requirements for safety training may change depending on the stage of development (i.e. when workers are doing above ground construction after the concrete slabs are in place.)

EPA is very concerned about onsite worker safety, and takes actions to protect workers when necessary. However, the safety of site workers is the ultimate responsibility of their employer, and is regulated by other federal and state agencies (The Washington Industrial Safety and Health Act (WISHA) and Occupational Safety and Health Administration (OSHA)). A health and safety plan is always required for site workers; however, EPA does not approve worker health and safety plans, we only provide comments as necessary. When inspectors representing EPA are on site, they point out any safety issues they observe.

Are the workers at risk from contamination on the construction site?

The short answer: Workers who wear the proper safety equipment and follow required safety precautions are not at risk from contamination on the construction site.

The long answer: The two terms we use to describe the risks associated with exposure to soils are “acute risk” and “chronic risk.”

Acute risk means that you might get sick right away if you are exposed to contaminated soil either by accidentally eating the soil (for instance eating a sandwich with dirty hands) or breathing in dust.

Chronic risk means that your health might be affected if you are exposed to contaminants by eating the soil or breathing in dust over the course of decades.

The current levels of arsenic and lead in the site soils **do not pose an acute risk**. The soil levels pose a chronic risk. However, any exposure is prevented by the use of proper safety gear, simple precautions, and maintaining proper dust control.

At current site concentrations, the proper safety gear for the site includes boots, coveralls, hardhat and gloves. Workers are required to wash their boots prior to leaving the contaminated areas of the site, and then remove their coveralls and gloves, and wash their hands prior to leaving the “changing area” to prevent contaminated soil from being ingested or taken off the site. These are the same safety gear and safety precautions that were required when hazardous waste was still on site.

Before the cleanup began, the site contained hazardous waste. Some areas of the site had material that was up to 30% arsenic which could cause an acute risk if you ingested the soil in this area. However, there has been a significant amount of cleanup work on the Asarco Smelter over the past decade. Almost 250,000 cubic yards of the most contaminated material from the site has been excavated and placed into the onsite hazardous waste landfill. This includes all of the material from the arsenic kitchen area where soils had very high arsenic concentrations.

To ensure that the site safety measures are protective enough, a variety of site workers are fitted with personal air monitors to measure their exposure to site contaminants. Personal air monitoring results at the site have always been well below applicable standards. The Washington state and federal allowable safe level for worker exposure (known as the Permissible Exposure Level (PEL)) is $10\mu\text{g}/\text{m}^3$ (10 micrograms per cubic meter of air) for arsenic and $50\mu\text{g}/\text{m}^3$ for lead over an 8 hour time weighted average. Results of worker monitoring occurring in potentially contaminated soils showed levels of $<.004\mu\text{g}/\text{m}^3$ to $1.1\mu\text{g}/\text{m}^3$ for airborne arsenic, and $<.004\mu\text{g}/\text{m}^3$ to $0.98\mu\text{g}/\text{m}^3$ for airborne lead. This means that the highest measured arsenic exposure was approximately 1/10th the allowable standard, and the highest exposure for lead was 1/50th the allowable standard.

Have contaminants made any site workers sick?

EPA has not received any credible evidence that workers are getting sick from exposure to site contaminants.

Who is doing the air and soil monitoring and testing for worker safety and safety of the community?

Point Ruston is responsible for monitoring the air and water. The results are documented in monthly reports and reviewed by EPA. Air monitoring has been ongoing since the very beginning of the cleanup at the Asarco smelter and EPA is posting air monitoring data on our web site at

<http://yosemite.epa.gov/r10/cleanup.nsf/sites/asarco>

In addition, EPA uses onsite inspection as appropriate to ensure that environmental requirements are met.

How are environmental and construction hazards contained on this site? What measures are in place to prevent contamination going into the community?

Health and safety plan:

Activities at the site are conducted under the site's health and safety plan. The plan covers the actions needed to prevent contaminants from leaving the site. For example, to prevent the generation of dust, which can get caught in the wind and carry contamination off site, water trucks and fire hoses are used to mist soil as it is being moved, excavated or spread. In addition, piles of dirt are covered or sprayed with a protective coating to prevent dust forming.

Air monitoring:

The short answer: Air monitoring results show that there is no increased health risk at Point Ruston and in the surrounding community. The air is safe to breathe. Any measurable arsenic and lead in the air is well below allowable levels set by the Occupational Safety and Health Administration (OSHA) and EPA.

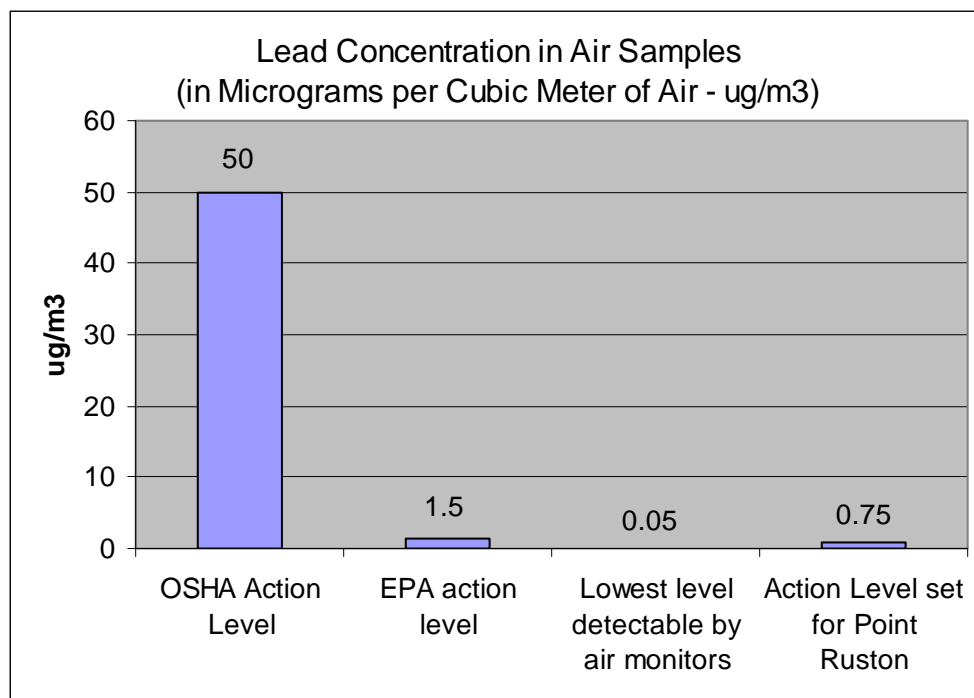
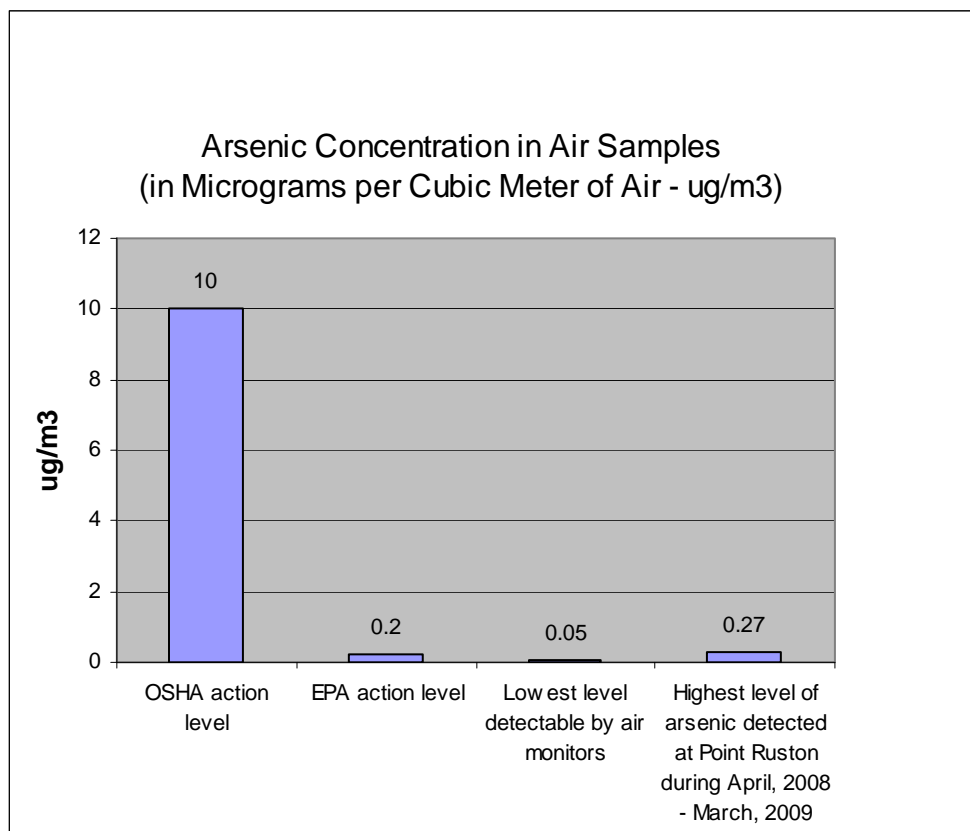
The long answer: Air monitoring results are compared to "action levels" set by EPA for the site. Since EPA action levels are well below safe levels, it is still safe at the site and in the community when action levels are exceeded. Action levels tell us that some changes may be needed.

The action level set for Point Ruston for arsenic was chosen so that a person could be continuously exposed over a 15-year period without having any adverse health effects. For lead, EPA's action level for Point Ruston is ½ of the normal EPA air standard and is therefore much more protective of human health.

If the air monitors at Point Ruston detect a level of contamination that is above the site action level, EPA and Point Ruston reevaluate activities on the site and make the necessary changes to bring the level of contamination down to below action levels.

The next two charts compare the action levels EPA has set for Point Ruston, the OSHA standards set for worker protection (which are also used by the Washington Department of Labor and Industries for worker safety), and the highest levels of lead and arsenic detected in the air at the boundaries of the site.

Air Monitoring at Point Ruston



Three high volume air monitors are used to detect the level of lead and arsenic in the air at Point Ruston. As you can see in the next table, the air action levels have rarely been exceeded. The arsenic action level was only exceeded in one of the three monitors on two out of 365 days. The detected amount and duration are insignificant and pose no health risk. The lead action level was never exceeded. In almost all cases, the levels of arsenic and lead leaving the site are below detectable levels.

The air monitoring results show that there is no increased health risk at Point Ruston and in the surrounding community. **The air is safe to breathe.**

Numbers of days in each month arsenic and lead have been detected at a level above 0.2 ug/m³ (April, 2008 to March, 2009)			
	Arsenic	Detected Level	Lead
April, 2008	1 day	0.27 ug/m ³	0 days
May, 2008	0 days		0 days
June, 2008	0 days		0 days
July, 2008	1 day	0.25 ug/m ³	0 days
August, 2008	0 days		0 days
September, 2008	0 days		0 days
October, 2008	0 days		0 days
November, 2008	0 days		0 days
December, 2008	0 days		0 days
January, 2009	0 days		0 days
February, 2009	0 days		0 days
March, 2009	0 days		0 days

Community Concerns:

EPA heard several concerns about dust blowing off of the site. As a result, we increased oversight of activities. Unannounced and anonymous site inspections have shown that site environmental controls are being conducted properly. Air monitoring action levels have not been exceeded.

Water monitoring:

Water discharges from the site are also monitored at the active public storm water outfalls that cross the site. Results have been at acceptable levels.

Is "Stack Hill" clean and available for development?

Stack hill has been cleaned up to the same residential cleanup standards that are used in the rest of Ruston and North Tacoma. Houses are currently being built on this area of the site. The first resident is currently living on the former stack hill.

What is being done in Ruston and North Tacoma with regards to yard cleanup?

Cleanup of residential yards and some areas of Point Defiance Park is still ongoing. Asarco is conducting the cleanup using money from the Asarco Trust, a settlement fund from previous litigation. EPA has received funding under President Obama's American Recovery and Reinvestment Act (the economic stimulus package) to complete the yard cleanup. EPA expects this to be completed at the end of 2011.

What is going to happen with the slag peninsula?

The slag peninsula, which is owned by the Tacoma Metro Parks District, will be capped by Point Ruston under their agreement with EPA. The cap will prevent people from coming in contact with the slag, and prevent rainwater from seeping through the slag. The peninsula, which is composed entirely of slag, covers approximately 23 acres. Huge stones (shoreline armoring) have been placed around the outside perimeter to prevent erosion.

There have been stories in the paper about EPA and the State receiving millions of dollars for cleanup from the Asarco bankruptcy. What is the status of this money?

At this time, EPA has not received any money as part of the Asarco bankruptcy settlement. EPA has a pending multi-million dollar claim for completion of yard cleanup work in Tacoma, dredging the Tacoma yacht basin and another area of sediments between the yacht basin and the ferry dock, and armoring the tip of the slag peninsula. Money received by EPA will be placed in a special account and used to pay for cleanups. The state of Washington also has a multi-million dollar claim for additional yard cleanup outside the Superfund area.

Are there jobs available at Point Ruston? Is EPA hiring for yard cleanup?

If you would like information about job opportunities at Point Ruston, please drive by the site. The companies working at the site have posted placards with their contact information. You should contact their offices directly to see if they are hiring. EPA is not involved in hiring for the Point Ruston project.

In the fall, there will be a bid solicitation for yard cleanup under the American Recovery and Reinvestment Act. We have not made any decisions yet how we will advertise. However, we will not be hiring individual workers.

Where can I view the records (including sampling results) of the work that has been completed and what work is in progress? Who is the contact person?

Site information is available at the office of Citizens for a Healthy Bay in Tacoma. Their office is located at 917 Pacific Avenue, Suite 100, Tacoma Washington. Contact Leslie Ann Rose at (253) 383-2429.

You can also review detailed site information at EPA's Superfund Records Center in downtown Seattle, located at 1200 Sixth Avenue, Suite 900 on the 7th floor. Though not required, an appointment is recommended so you can be better served. The Records Center telephone number is 206-553-4494. The Records Center includes a public viewing area for Dockets and Administrative Records, and a microfilm reader/printer. No records for public review are kept at Point Ruston.

What agencies are involved in the site? What roles do they play?

Environmental Protection Agency

Kevin Rochlin, Project Manager
1-800-424-4372, ext. 2106
rochlin.kevin@epa.gov

Jeanne O'Dell, Community Involvement Coordinator
1-800-424-4372, ext. 6919
odell.jeanne@epa.gov

Caryn Klaff, Community Involvement Coordinator
1-800-424-4372, ext. 1275
klaff.caryn@epa.gov

Citizens for a Healthy Bay (CHB) – 253-383-2429
To access the site Information Repository.

State Department of Ecology – 360-407-6245 or 360-407-6790
For health related questions.

Tacoma-Pierce County Health Department (TPCHD) – 253-798-3503
For health related questions.

MRC Construction – 253-759-6015 (call on Tuesday or Friday)
For questions about residential yard cleanups.

How can I get copies of site records?

If you want copies of any of the site records, you'll need to complete a Freedom of Information Act (FOIA) request identifying specifically what you want. There is a charge per page. Our Records Center staff can explain what the costs are or you can visit our FOIA web site at:

<http://yosemite.epa.gov/r10/extaff.nsf/FOIA+Pages/Freedom+of+Information+Act>

Timeline of site history

- 1887 - Established as the Ryan Smelter by Dennis Ryan to produce lead.
- 1889 - Sold to Wm. R. Rust who changed the name to the Tacoma Smelting & Refining Co.
- 1890 - Lead smelter operations began.
- 1905 - Sold to the American Smelting & Refining Co. (ASARCO).
- 1912 - The smelter became a major supplier of copper, and lead was no longer produced.
- 1983 - Commencement Bay and the Asarco Smelter site became one of the first Superfund sites in the nation.
- 1985 - Copper smelting ceased.
- 1986 - Plant closed due to environmental and economic reasons.
- 1983 to 2000 - Remedial Investigation and Feasibility Study to determine appropriate clean-up methods for the site and offshore sediments completed.
- 1993 - Smelter stack demolished January 17th.
- 1993 - Remedy selected for contaminated yards in Ruston and Tacoma.
- 1995 - Asarco Days public community visioning workshops for community input into the smelter cleanup plan held.
- 1995 - Smelter remedy selected and Consent Decree entered with Asarco for cleanup of the Smelter.
- 1997 - Master Redevelopment Plan and Environmental Impact Statement for site approved.
- 2000 - Sediment remedy selected.
- 1997 to 2005 - Remedy designed, landfill is built and filled, final buildings demolished, stack hill cleaned up.
- 2005 - Asarco filed for bankruptcy protection.
- 2006 - Bankruptcy Court approved smelter property sale to MC Construction conditional upon an approved cleanup agreement with EPA. EPA and MC Construction, doing business at the site as Point Ruston, reached an agreement and the property sale went through.



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*Former Asarco Smelter
Tacoma, Washington
June 2009*

Site Background

The smelter began operations in 1890 as a lead smelter. Asarco purchased the smelter in 1905 and converted it to a copper smelter in 1912. The smelter specialized in processing ores with high arsenic concentrations and recovered arsenic trioxide and metallic arsenic as by-products. Operation of the Asarco smelter for over 95 years resulted in contamination of the surrounding area primarily with arsenic and lead. That contamination was caused by airborne emissions from smelting operations. In recovering copper from ores and concentrates, the smelting process also produced slag, a hard, glassy material containing elevated concentrations of arsenic, lead, and other metals. Smelter slag has been used in various locations throughout the community for driveway, walkway, and parking area surfacing, and in larger pieces for retaining walls and rockeries.

In 1983, EPA listed the Asarco Smelter, the surrounding properties, and Commencement Bay as one of the nation's first mega-Superfund sites. Copper smelting operations ceased in 1985, the arsenic production plant was closed in 1986, and in 1993, Asarco began cleanup of the site. Before beginning cleanup, Asarco completed a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS outlines the investigation of site contamination (remedial investigation) and evaluates potential site remedies (feasibility study).

Asarco and EPA spent years working with the community before selecting the current remedy for the smelter. The remedy for the smelter consists of putting the worst contamination into an onsite hazardous waste landfill, and then putting a protective barrier (site cap) over the site. All work was supposed to be completed in 2003, but work slowed down and was extended as Asarco became financially unviable. In 2005, Asarco declared bankruptcy. The site and its associated liability for cleanup were purchased in 2006 by Point Ruston.

*Alternative formats are available. For reasonable accommodation, please call
Jeanne O'Dell. TTY users, please call the Federal Relay Service at 800-877-8339.*